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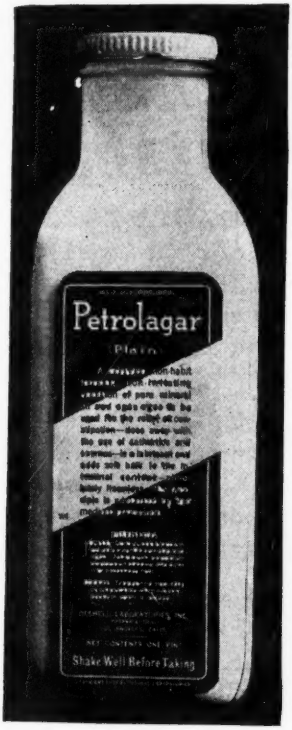

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Volume III | OCTOBER, 1924 | Number 1

Editorial

Buying Information

It is our ideal to make THE HOSPITAL BUYER a real source of buying information for the hospital executive. We therefore wish to direct your attention to our facilities for helping you in this direction—which we hope you will make use of to the fullest extent.

If you are in the market for any article or equipment or commodity, write to us, and we will immediately send you the names of the leading manufacturers of that particular article.

Sometimes it is difficult for you to determine where to look for quotations, particulars and prices of new equipment and material. You may save yourself a lot of time and trouble by simply dropping a note to us, telling us your needs, and we will put our Buyers' Service at your disposal. That is to say, we will not buy the article for you, but we will help you do your shopping—for we regard the readers of HOSPITAL BUYER as associate members of our Buyers' Club.

There is no obligation in this whatever, and we are at all times glad to furnish you the best information at our disposal.

Palatability

By pegging away at it, we seem to be arriving at some definite and logical conclusions on the much vexed question of diet.

We note that Doctor Joslin, speaking at a conference of the American Hospital Association, makes this important statement:

"Hospital diet, more than rest, constitutes the chief therapeutic agent for the patient's recovery."

He points out that palatability is the important factor in diet, especially for the sick. This is nothing new, because we can go back to the Aphorisms of Hippocrates, and find:

"An article of food or drink which is slightly worse, but more palatable, is to be preferred to such as are better but less palatable." (II, 38.)

No doubt, the meeting of the American Dietetic Association being held this month will give due consideration in some of its papers to this important aspect, and we hope to be able to publish reprints of such papers in our forthcoming issues.

The First Impression

One of the most important and perhaps one of the most neglected things about a hospital is the first impression which is made on a patient.

Our readers will remember an article several months ago, in which the writer humorously referred to the prison-like aspect of most hospital reception rooms.

In the rush of business, you may think that you have more important things to attend to than rearranging your reception room or changing the method of receiving the patient—and then, one day, you may wake up and find that you have been neglecting this very important point for other matters of less import.

Word-of-mouth advertising is the most valuable kind of publicity which the hospital can obtain, and you get your word-of-mouth advertising by the first impression you make, not only upon the patient but upon the patient's friends.

Put humanity, kindliness, consideration and cordiality to work at the front door of your institution, and see how much good it will do you.

Exposition of the Annual Hospital Conference, 1924

RECKONING the hospital year's starting from the convention date, we can say that another year has passed into hospital history with the closing of the twenty-sixth annual convention of the American Hospital Association.

We all realized that following after the great Silver Jubilee year in Milwaukee, the Buffalo convention would have to be indeed a good one to show an advance. The fact that many of those who have been going to hospital conventions for years consider the Buffalo convention to have surpassed the great Silver Jubilee meet, means that we can accord to this gathering the palm of having exceeded expectations.

Being commercial people, we must, of course, confess that our principal interest was in the exposition. The papers and reports presented to the Association are a distinct contribution to the science, and their digestion and discussion will profitably occupy many an hour during the forthcoming year. This was the purpose for which conventions were established, and the exposition was in the beginning only a step-child of the convention—but it has now grown to such importance that it must rank not merely as a "side show" but one of the most important features of the hospital convention.

Hospital executives are hard people to reach in a commercial way. The manufacturer introducing a new line in the field finds many more obstacles in his path than in the ordinary channels through which he distributes his goods. Hospital executives are busy people, and sometimes many heads have to be consulted before a purchase is made.

But here, for one week in the year, the manufacturer with something of real interest to the hospital executive "gets his innings" and the manufacturers certainly took advantage of it at Buffalo.

The commercial exhibits represented an educational display of everything in the way of equipment, impedimenta, apparatus, foodstuffs and clothing which the hospital is called upon to buy. They displayed every new development in what has come to be a regularly established business — that of providing supplies for the hospital, sanatorium, and nursing institution.

This year, the commercial exhibitors themselves seemed to have obtained even a better grasp of the fundamental fact that this is not a selling exposition; that you cannot expect a hospital superintendent to walk up to a booth with a requisition blank in his pocket for something he never saw before; that the man who makes good in this exposition is not the order taker but the sales maker; that this exposition is for the purpose of display, demonstration and explanation—after which orders follow, when the proper impression has been made.

Anyone who has been studying methods of selling to the hospital could readily see, on a tour of the exhibits, that those in charge of

the booths were well trained and qualified people, who took infinite pains to make every possible demonstration and explanation.

Now, may we point out to the hospital executive that great good can come from a study of the literature picked up at the exhibit and a careful consideration of the demonstrations, because this is a real education, an opportunity to get real good from the many things you saw and heard in Buffalo. Your consideration of the manufacturers exhibiting there is what will encourage them to spend even more money next year in making this exposition a noteworthy demonstration of educational value.

The convention was particularly honored in the presence of some distinguished foreign visitors—the most notable of whom were the Secretary of the British Hospital Association, J. Courtenay Buchanan, Esq., C. B. E., and a group of physicians from the Antipodes, including Doctors Worrall and DeVine, and Doctors Elliott and Falconer from New Zealand. The extent and scope of our national convention was in the nature of an eye-opener for these already wide awake Britishers.

A slightly military touch was given the convention by the fact that the Army bugler sounded the call to the meetings and blew "taps" at the close of each day, and the best place to eat in the neighborhood was the mess hall at the Armory.

The Buffalo folk who, under the capable generalship of Dr. Walter S. Goodale, did so much to make Buffalo a real Mecca for hospital people during the week, deserve a great deal of credit for their hard work and the splendid spirit of welcome and friendship which they were able to inject into the whole affair. They are proud of their thriving city in the Empire State, and their city can be proud of them.

The conference suffered under one serious handicap and that was the illness of Doctor Warner, who unfortunately could not be on deck to handle affairs in his usual capable manner. However, the pinch hitters who did duty for him did well, indeed, and everything at the meeting went off smoothly.

The number of visitors and guests registering was three thousand, and in addition to the British representatives already mentioned, the Canadian delegation was very large, and some visitors from the Orient lent a missionary touch to the affair—Dr. Percy Watson, of the Foo Chow hospital, and Dr. T. D. Sloan of the Pekin Union Medical School Hospital, being present.

Most of our advertisers were represented by attractive well dressed and well manned booths, while our own little paper had an exhibit which helped create a great deal of interest and attention. By way of adding a lighter touch, we ran a little guessing competition, which is reported on another page.

Now that the smoke of battle has cleared away and the convention is all over, we can with utmost sincerity say that President MacEachern and his associates are to be complimented on the convention, and thanks are especially due them for the splendid facilities they arranged for the commercial exhibitors.

The Hospital Buyer Guessing Contest

The Hospital Buyer Booth at the American Hospital Convention

JUST by way of novelty and to make things a little bit exciting around THE HOSPITAL BUYER booth at the convention, we had an interesting guessing contest.

All the fuss centered around a large glass jar which was filled with "Carpules" donated by the Cook Laboratories, Inc., of Chicago.

These "Carpules" are the small glass vials which, in this new system of hypodermics, are filled with medication and slipped into the breech of the syringe.

We thought it would be quite a clever trick to guess how many "Carpules" were in the glass jar —and that was the contest.

Twenty-five dollars in cash prizes were offered to those who guessed closest to the correct number of "Carpules" in the jar. The first prize was $10.00, second $5.00 third and fourth $2.50 and five prizes of $1.00 each. This contest was open only to the visitors who were in some way engaged in hospital work.

More than five hundred filled out the contest slips and they are no doubt, all anxious to learn the correct number. The guesses ranged from 230 to 21,800. There were 695 "Carpules" in the jar. It was very amusing to watch some of the contestants try to figure out the correct number by the use of algebra, geometry, trigonometry and a lot of imagination.

Now for the names of the winners: Katherina Weber of Olney Sanatorium, Olney, Illinois, was the lucky one, guessing 700. That

was a good guess, Miss Weber. You win the first prize of $10.00 and we take this opportunity to extend our heartiest congratulations.

Mary F. Deaver of the Missouri Methodist Hospital at St. Joseph, Missouri, was a close second, guessing 708. Miss Deaver wins the second prize of $5.00.

Dr. Edward J. Murray of The Julius Marks Sanatorium, Lexington, Kentucky, won the third prize of $2.50. Dr. Murray guessed 714, not so bad for a Kentuckian.

Mrs. J. E. Roth of The South Side Hospital, Pittsburgh, Pa., won the fourth prize with a guess of 731.

The fifth, sixth, seventh, eighth and ninth prizes of $1.00 each were awarded in the following order: C. J. Dedcer, Toronto General Hospital, Toronto, Ontario, guessed 732; Edna Rathbrun, Buffalo City Hospital, Buffalo, New York, guessed 740. Miss Olive A. McKay, Winchester Hospital, Winchester, Massachusetts, guessed 750; Edith F. Bennett, Choate Memorial Hospital, Woburn, Massachusetts, guessed 630; R. R. Hewson, Pasadena Hospital, Pasadena, California, guessed 630.

Everyone who guessed seemed to have a good word for THE HOSPITAL BUYER and we are sorry that every one of our readers was not able to participate in this contest and win a prize. The cash prizes will be mailed from the offices of THE HOSPITAL BUYER on November 1st, and with every prize we extend our very best wishes for your success in the work you are now engaged in.

Adaptability of Tile to Hospital Requirements[1]

By CARL H. GEISTER[2]

You, who are specialists in hospital management, will doubtless be interested to learn of the pertinent results obtained so far in an investigation of tile that is being carried on at Mellon Institute. This research, which is being conducted under the auspices of the Associated Tile Manufacturers, has for its purpose the determination of the suitability of tile for specific uses. The properties of tile are being studied broadly and its adaptability as a flooring material is being considered from chemical, physical and hygienic viewpoints. The object of this progress report is to summarize the experimental findings to date that are of special interest to hospital officials.

REQUISITE PROPERTIES OF FLOOR MATERIALS FOR HOSPITALS

In the course of the present investigation it was found desirable to lay down certain requirements as essential properties of an ideal floor material for hospitals. The requirements thus established are as follows:

1. *Sanitary Requirements—The* material must be waterproof, resistant to decay and inimical to the growth of micro-organisms. It must reflect (without glare) the proper amount of light and have

[1]A preliminary report presented before the American Hospital Association, Buffalo, N. Y., October 9, 1924.

[2]Industrial Fellow, Mellon Institute of Industrial Research, University of Pittsburgh, Pittsburgh, Pa.

certain structural features that facilitate the process of cleaning.

2. *Durability*—An ideal material is resistant to abrasion, deterioration, fire, absorption of liquids, staining, pitting and the action of chemicals. Its transverse, tensile and impact strengths must be such that they will resist the forces to which finishing materials are commonly subjected in use. Its linear coefficient of expansion must be in accordance with those of the other structural materials used, in order to avoid cracks and bulges. Its thermal conductivity should be low and its dielectric strength such that adequate safety is insured with modern electrical equipment.

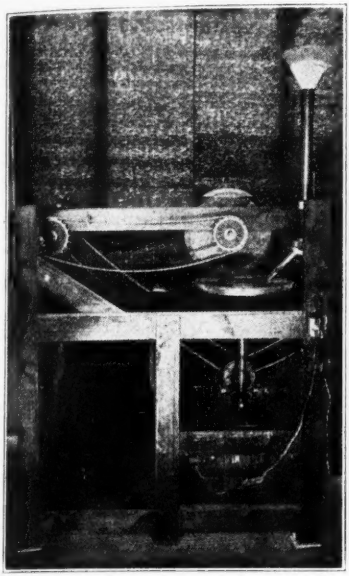


Fig. 1.—Abrasion Machine Used at Mellon Institute

The samples are fastened in the horizontal disc and worn by the rubbing action of the upright leather wheel with a constant amount of standard abrasive.

3. *Esthetic and Comfortative Requirements*—The finishing material must be permanently pleasing to the eye with respect to appearance, reflected light and cleanliness. The surfaces must be easy to walk on with reference to plane, resiliency and firmness. Safe frictional resistance and low thermal conductivity values are desirable.

4. *Economic Considerations*—A finishing material that fulfills all these requirements and gives the longest effective service at the least cost is regarded as economical by structural engineers and architects.

Experimental Investigation of Tile

The investigation at Mellon Institute has been carried on so far entirely by means of practical laboratory tests.

The factors of sanitation connected with proper lighting, surface smoothness, accessible corners, and decomposition by oxidation or microorganisms have been studied by critical analysis of available technical information and suggestions of scientists, engineers and users. The following experimental tests have been applied thus far in giving attention to physical properties of major importance:

(1) Abrasion,
(2) Absorption,
(3) Resistance to chemicals,
(4) Frictional resistance,
(5) Resistance to heat,
(6) Indentation, and
(7) Resistance to staining.

Methods of Test

(1) *Abrasion*—The method adopted was the application of mechanical wear upon the materials under examination. The conditions of wear have been adjusted to make the similar to those found in actual use, but more severe in order to shorten the period of testing. The results thus obtained and the information from the relevant literature and from practical experience were then studied critically.

A special apparatus for conducting the abrasion test was constructed to meet the following requirements:

(a) The experimental wearing operation shall be completed in a short time.

(b) The sample shall be the standard commercial product.

(c) The sample shall be of such size and weight that a high degree of precision in measurements can be maintained.

(d) The degree and type of slippage shall be similar to that produced in the natural wearing processes.

(e) A heavy, slow-moving load shall be applied.

(f) There shall be no excessive rise in temperature.

(g) Water shall not be used as a cooling agent or carrier of the abrasive.

(h) The abrasive must be similar in character to that found on the average floor.

(i) Only materials commonly applied to actual floor installations shall be used to produce the wear.

This apparatus subjects the moving samples to wear against a leather wheel of special design in conjunction with a standard abrasive. The characteristic movements of the walking process have been imitated. A straight and twisting slippage as well as an intermittent releasing of the pressure have been developed. The percentage losses in weight and thickness that resulted from twelve-hour testing periods were recorded.

(2) *Absorption*—A systematic study of materials was conducted, in which the amount of absorption per unit time was ascertained to a close degree. A practical procedure of testing was used in which the samples were submerged in water for five-day periods and the increases in weight measured. This method is in accordance with that prescribed in the *Navy Department's Specifications* (2911C of

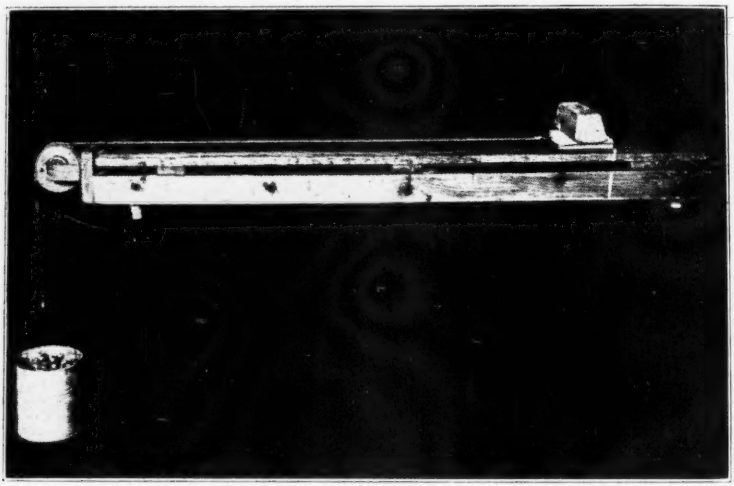


Fig. 3.—Frictional Resistance Test Apparatus Used at Mellon Institute
This apparatus is used for determining the coefficients of friction between new materials and the panels of leather or rubber

Sept. 1, 1916). No tests were made on glazed floor tiles, because they offer a surface similar to vitreous tiles after being installed. A study was also made of the deteriorating effects of water upon the materials.

It was found that tiles are not affected by exposure to water and that vitreous tiles especially are impervious to water. Worn samples were also submitted to the absorption test.

(3) *Resistance to Chemicals*—The materials were submerged in solutions of several acids and alkalies. Weight decreases and descriptions of the deteriorating effects observed were noted for the samples tested.

The chemicals selected were as follows:

(a) 95% sulfuric acid.
(b) 55% nitric acid.
(c) 35% hydrochloric acid.
(d) 5% phenol.
(e) 50% sodium hydroxide.
(f) 4% sodium hypochlorite.
(g) 5% tincture oldine, and
(h) 5% potassium permanganate.

It was found that tiles are very resistant to the action of these chemicals.

(4) *Frictional Resistance*—The static coefficients of friction between clean new materials and dry leather or rubber surfaces were found, because this factor is indicative of the readiness with which slippage starts.

A study was also made of the effects of water and other detergents on the materials. It was learned that water applied to clean materials increased their frictional resistance. The application of soaps and other detergents decreased the frictional resistance.

The average of the static coefficients of friction for tiles is slightly above the average of the nineteen other materials tested.

(5) *Resistance to Heat*—The materials were subjected to heat in a well ventilated oven. The temperature was raised successively by one-hundred degree centigrade intervals up to 300°C. or until those temperatures below 300°C. were reached at which signs of deterioration appeared and the sample failed. When failure resulted it was due either to combustion or decomposition of the material. New samples were used for each testing period.

Tiles showed no signs of deterioration or of failure.

(6) *Indentation Tests*—Concentrated loads were applied to the materials through furniture casters representative of those used in hospitals. Varying loads were applied according to the type and size of caster used.

(7) *Resistance to Staining*—The materials were submerged in five per cent solutions of methylene blue, eosin, iodine and potassium permanganate. After a definite period of time, the samples were removed and broken apart. The degrees of surface staining and the depths of penetration were noted. The removal of stains was also studied.

Tiles are not susceptible to permanent staining. Due to the fact that tiles are resistant to chemicals, the stains could be removed without injury to the samples tested.

Summary of Experimental Results

The experimental findings are presented concisely in Table I.

TABLE I

The results are based on the average of varying numbers of tests made on individual trade materials of the types designated.

Several samples which were worn in the abrasion test also were submitted to the absorption test in order to study their interior

properties. The results obtained are given in Table II.

TABLE II.

These results indicate that tiles are of a homogeneous nature throughout.

Conclusions

Vitreous tiles are the only material tested thus far that do not show an increase in weight due to absorption. Vitreous tiles are resistant to abrasion, stain, strong chemicals and fire. Continued exposure to light, heat and moisture does not deteriorate them. Their relatively smooth surfaces are hygienically desirable. Sanitation is increased by the reflected light furnished by the use of proper tiles. Their physical properties and characteristics combined with simple cleaning methods, make tiles an advantageous material for hospitals. They meet all requirements to an exceptionally large degree.

TABLE I

Material	Percentage increase after one day in water	Percentage increase after two days in water	Percentage increase after five days in water
Vitreous tile (1) average worn	0.0	0.0	0.01
Vitreous tile (1) average new	0.0	0.0	0.0
Semi-vitreous tile (2) average worn	5.15	5.71	6.20
Semi-vitreous tile (2) average new	5.19	5.52	5.95
Rubber (1) average worn	1.21	1.52	2.40
Rubber (1) average new	0.69	1.01	1.45
Rubber (2) average worn	0.48	0.55	0.78
Rubber (2) average new	0.20	0.33	0.45
Linoleum (1) average worn	3.22	4.30	5.81
Linoleum (1) average new	1.68	2.46	3.49

TABLE II

Type of Material	Abrasion test Percentage loss —12 hours exposure	Absorption test Percentage gain —five days	Resistance to chemicals[1]	Frictional resistance test. Static coefficient of friction on leather and rubber	Heat test. Deteriorating and failure temperatures, degrees centigrade	Indentation test. Depth permanent depression one in. caster—48 hours, 75 lbs.[2]	Resistance to staining[4]
Vitreous tiles	3.06	0.0	A	0.541–0.594	.....	0.000 in.	A
Vitreous ceramic mosaic	.....	0.0	A	.....	.....	0.000 in.	A
Semi-vitreous tiles	5.57	4.69	A	0.540–0.668	.....	0.000 in.	B
Glazed vitreous tiles	.....	0.0	A	.....	.....	0.000 in.	A
Glazed semi-vitreous tiles	.....	.....	A	.....	.....	0.000 in.	A (Glaze
Rough paving tiles	.....	3.21	B	.....	100[3]	0.000 in.	C
Rubbers	10.47	1.02	C	0.568–0.569	100–300	0.002 in.	C
Linoleums	28.65	6.08	C	0.619–0.602	100–300	0.011 in.	D
Corks	22.58	20.18	C	0.562–0.616	100–300	0.020 in.	D
Magnesite compositions	.....	8.25	D	0.341–0.612	100–300	0.000 in.	E
Asphaltic compositions	.....	0.82	B	0.528–0.664	100–300	0.010 in.	B
Marble aggregates	17.30	5.02	D	0.387–0.489	200–300	0.000 in.	E

[1]The letters tabulated represent the composite resistance of the materials to the action of hydrochloric, sulfuric, nitric and carbolic acids, sodium hydroxide and sodium hypochlorite, based on measured weight losses and judged by physical appearance.

[2]Slight loss in weight; appearance and strength of samples unchanged.

[3]These measurements were taken after the sample had rested for one week.

[4]The letters tabulated are based on degree of surface staining, depth of penetration, ease of removing stains and resistance to the action of chemicals by the materials. Solutions of methylene blue, eosin, iodine and potassium permanganate were used as staining agents.

New York French Hospital

By I. H. Phillips

Special to The Hospital Buyer

ONE of the most interesting hospitals of New York City is the French Hospital, supported by the French Benevolent Society of New York. It was founded over 115 years ago. The present building was opened 20 years ago at 450-58 West 34th St., Manhattan, in the populous central part of the city.

While catering to the members of the French colony in particular, the hospital is open freely to anyone who desires and needs its valuable services.

The hospital management has found that its present accommodation is not sufficient for its needs and contemplates the enlargement of its building as soon as the state of its finances will permit. The receipts of the hospital, as a matter of fact, have not grown during the last year, while the expenses of the institution have necessarily advanced due to the higher cost of labor, coal and the cost of living which is affecting all hospitals in large cities.

The hospital receipts for the year 1922 to 1923 were $180,994, while the expenses of the institution and of the asylum connected with it were $216,848.

The dispensary in connection with the hospital is now caring for 5,000 patients a year, and continues to grow larger.

There is a clinic for asthma which is making rapid progress and is developing fast.

The hospital is in Class A of the American College of Surgeons and is considered uptodate in its medical equipment. The professional work of the hospital has increased in every way and maintained a high standard of efficiency, but the need for a larger plant is felt acutely.

The Training School for nurses was established in 1906. Graduates of this school are qualified to take the examination for the degree of registered nurse. In 1912 a nurses' home was built, with all accommodations for the convenience and comfort of the students.

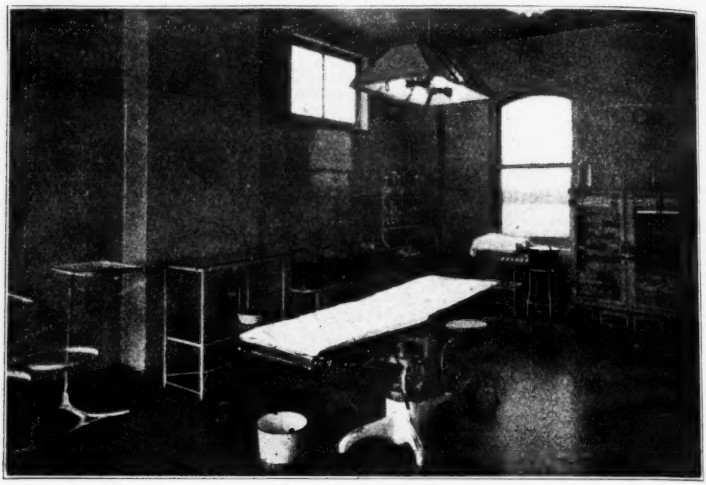
Thorough individual instruction in medical and surgical nursing in the wards and private rooms of the hospital is given to the students, as well as a complete course in the operating room management and technique.

The president of the French Benevolent Society which conducts the hospital is Lucien Jouvaud; first vice-president, Jules Weber; second vice-president, Theodore Seltzer; third vice-president, Louis H. Huot; treasurer, P. C. Cartier; secretary, Vincent Fulchibon.

The first clinic in the United States for the treatment of diseased and infected kidneys of children and infants has been opened at the New York Hospital under the auspices of the Urological Department, James Buchanan Brady Foundation.

The hospital authorities for several years, it is explained by Dr. Thomas Howell, superintendent of the hospital, have been aware of the great increase in children's affections of this character — infections which in later years have serious results.

"It is a well-known fact that the kidneys are often affected after scarlet fever and other serious illnesses. In most cases, or certainly in a large number of cases, the treatment of these children has been delayed until later life, when the disease has progressed and the results are fatal. Now we will be able to treat these cases at the inception of the disease—something that has never been practiced on a large scale heretofore."



Operating Room, French Hospital

"The establishment of the children's clinic," said Dr. Howell, "rounds out the Urological Department, as it already has clinics for the treatment of disease of the urinary tract for men and women. A number of newly invented instruments, small enough to be useful in the treatment of infants and little children, has made this possible.

Dr. Howell said that the public school authorities have been made acquainted with this new clinic. The clinic charge will be nominal—twenty-five cents.

The Necessity of a Pure Raw Milk

By Henry Dwight Chapin, M. D., New York*

GOETHE once remarked that blood is a very peculiar juice. We can say the same of milk. Modern physiologic researches have shown that certain glands and secretions of the body have much larger functions than have hitherto been assigned to them. We need only refer to the internal secretions of various glands, formerly unrecognized, that are now known to exert a marvelous influence not only on physical life, but on mental development as well.

The Complete Food

These facts have led us to give a closer scrutiny to the more familiar fluids of the body, of which milk is one of the best known, as it constitutes the universal food for the young of all mammalia. From a nutritional standpoint it is recognized as a complete food, containing in itself all the elements required to support life.

While each species of mammalian young is perfectly nourished by the milk of its own mother, the food elements are present in varying proportions in different species, this depending largely on the rapidity of growth of the offspring. But milk is a complicated fluid, with more than one function to perform. This must always be born in mind when heat or other agents are brought to bear on it. As a general rule, the less milk is manipulated and the closer it is kept to its natural state, the better it will serve the ends for which it is intended. Any factor that tends to alter in any way the physical or vital character of milk must be considered as important, and possibly, under certain conditions and in certain ways, may not be of advantage. Some of Nature's foods are evidently intended to be taken in a raw state, as is shown by a certain failure in nutrition which follows when they are subjected to prolonged drying or heating.

There is one familiar but remarkable characteristic of all milks. When collected from the mother they are always in fluid form, but as soon as taken into the stomach of the young, they become more or less solid. This is due to a process of coagulation that takes place in only one of the ingredients—the casein—but which thus always alters the form of the ingested milk. While the carbohydrates and fats in their composition and reaction to the digestive secretions are a good deal alike in different milks, the proteins are essentially different. It is further to be noted that coagulation of the protein of milk takes place in different degrees in the different species.

Coagulation in the Stomach

We are now led to two queries: (1) What is Nature's object in presenting a fluid that always coagulates in the stomach receiving it, and (2) Why do the milks of different species coagulate in different ways? An answer will be found in study-

*Read before the American Association of Medical Milk Commissioners, Brooklyn, June 2, 1917.

ing the relation between the milk and the digestive tract that is destined to receive it. While a certain portion of the protein of all milks coagulates on coming in contact with rennin or rennin and acid, the manner and extent of the coagulation will stand in a direct relation to the proper evolution of the digestive tract of the animal.

Three Grades of Coagulation

Although there are many grades of coagulability in the milks of different animals, we may for practical purposes distinguish three of these grades and consider their significance. The protein may coagulate in a solid, gelatinous or flocculent manner. In the ruminant, herbivorous animals, such as the cow, sheep or goat, the protein coagulates in t o u g h, solid masses that cannot readily escape from the stomach. In these animals, digestion is always largely gastric and the stomach forms 70 per cent of the digestive tract. Later on, this stomach will be called on largely to digest tough, stringy masses of hay and straw, and the previous exercise on the tough curds of milk develops it for this future work.

In the nonruminant herbivora, such as the mare and the ass, the protein coagulates in gelatinous masses that can easily leave the stomach. There is an object in thus passing the curds quickly along, as in this class of animals digestion is largely intestinal, and the intestine forms about 90 per cent of the digestive tract. Later on, grasses and grains must be largely digested in the intestinal portion of the tube, and the curd is here also especially adapted to develop a certain part of the intestinal tract for its future work

In human milk the curd is thrown d o w n in flocculent masses, a form intermediate between the solid and gelatinous types of curd previously noted. While digestion begins in the stomach, it is largely carried on and completed in the intestine, and the stomach forms only about 20 per cent of the digestive tract. The curd is thus adapted to start the development and motility of the stomach, and finishes by instituting these functions in the bowel, which is destined to play a prominent part in digestion. Here again the curd, as far as **form** is concerned, furnishes, to a certain extent, an analogue precursor of the future food of the infant. The curd forms small, flocculent masses, and the food must be separated later into small particles by chewing before digestion can take place to the best advantage.

It thus seems to be a law that the coagulation of the protein of milk always takes place in such a manner as most readily to adapt the digestive tract for its future work, as this function needs special preparation. While a certain amount of protein is present in the milk of all animals and is necessary for tissue building and growth this protein must not only be coagulable, but must curd in a certain specific way in each species of animal for the proper evolution of their digestive tracts.

Milk Adapted to Change in Digestive Function

To realize what a divergence in the digestive functions has been taking place during the suckling period, imagine an infant, a kitten and a calf all being fed successfully on cow's milk. Here it is evident that at the very beginning of life the dif-

ference in their digestive processes is not very great; but wait a year until all three have passed the suckling period. The infant will be just beginning to eat soft food, the kitten will have developed so that it can eat flesh and bones, and the calf will be thriving on grass and hay. In one short year the development and divergence of their digestive tracts has been so great that the natural food of the calf is then wholly unsuited to the kitten or the infant, yet the chemist will find that the food of all three at this time contains the same basic nutritive elements as it did at birth. Milk is thus a food especially adapted for a digestive tract that is rapidly changing in form and function, and the differences in the digestive properties of the milks of various species are for real and specific purposes.

Developing the Digestive Tract

As nutrition is the basis of all physical life, we see how important a function milk performs at the very beginning of existence in developing and preparing the digestive tract of each species so that it can digest and assimilate food that must nourish it in later life. We must thus emphasize the fact that milk through one of its proteins has a **development** as well as a nutritive function to perform.

In addition to the curdling protein, an interesting fact in reference to the other protein of milk has recently been discovered; that lactalbumin has the power of increasing the efficacy of other proteins when combined with them. This forms another example of the power of one physiologic substance to activate another.

Since the discovery of the importance of the aminoacids, whose combination forms the various kinds of proteins, much study has been devoted to investigating the part each one plays in nutrition. It has been found that the albumin of the milk contains substances which cause growth, and that as small a proportion as 25 per cent of milk albumin added to a protein that does not produce growth has the power of inducing normal growth, while one-half casein incapable of producing such normal growth. It is important to appreciate the recent discovery that not all proteins are growth producers. Thus lysin and tryptophan are amino-acids essential to growth, which will not take place in their absence. Corn proteins will not in themselves produce growth. The astonishing fact has been established that of two mixtures containing the same number of calories, one may produce twice the amount of growth in the same time that the other mixture will produce, if from one-fourth to one-third of the mixture is milk albumin. Soy bean protein and milk albumin are nearly alike in this growth-producing effect.[1]

We must recognize the fact that "protein" is an indefinite term and that the same amount of protein and the same number of c a l o r i e s from different sources may have very different food values, and that the form or physical condition of the food may at times be as important as its composition and caloric value. It has been found that young animals c a n n o t thrive unless their food has a

[1]Osborne, T. B., and Mendel, L. B.; Jour. Biol. Chem., 1917, 29, 69.

certain bulk, and the food on which the young not only fail to do well but which causes death quickly becomes suitable if wet blotting paper is fed with it. In other types of animals, chopped straw added to the feed produces the same good effect.

Effect of Heat

In the giving of cow's milk to infants as a substitute food, we must consider the physiologic effects to any changes that may be effected by heat or other agents. Milk is a physiologic fluid, not merely a mixture of fats, proteins, carbohydrates, mineral matter and water, or a combination of protein matter and calories. As more is learned of its properties, the greater will be the demand for raw milk in the treatment of various nutritional defects. We must always remember that physical changes may interfere with some physiologic function. Pasteurization of milk, or boiling it, not only destroys bacteria but also produces a different type of curd and changes the form of the lactalbumin. These results may be beneficial, or at least not harmful in many cases, but physicians are called in to manage the minority that frequently require special adaptation of their food, and it is for just such cases that a supply of good raw milk may be of benefit. The effect of heat on the curd will depend on the temperature, and time of subjection to various degrees of heat. Prolonged heat may not only coagulate the albumin but also destroy the vitamins. For this reason it is wise to add fruit juices to the diet when heated milk is given to the infant for a long time. Many babies who do not thrive, or cease to thrive, on heated milk do well on a change to raw milk.

The desirability of pasteurizing milk that is handled carelessly or in large bulk is not here called in question. It is a safeguard that should be generally applied. While the mass of population is entitled to a supply of milk for ordinary household purposes that is free from contamination and from pathogenic bacteria, and while heating or pasteurizing milk will destroy these bacteria, it is going much too far to insist that all milk shall be thus treated and that no raw milk shall be available for use because it may be dangerous under some circumstances. Granting that raw milk may become dangerous, it does not necessarily follow that it may not be employed with advantage, or that its use may not be properly controlled.

It is true that the best raw milk can be quickly contaminated by careless handling in the home. The same is true, only in greater degree, of pasteurized milk. A false sense of security may lead to absence of all precautions, and very harmful changes may take place in such milk without any very objectionable manifestations, such as souring, to give warning of the change. In not a few cases there is no proper oversight of pasteurization, which may be very imperfectly performed and the protection may thus exist largely in name only. The medical profession and the milk producers and dealers should combine in a campaign of education

of the public as to the proper handling of milk in the home. This would in itself solve a good part of the milk problem. The housewives should be impressed with the necessity of keeping milk of all grades both cool and clean. The importance of this subject should be emphasized by this association, as the full benefits of certified milk will not be obtained unless extra care is employed all along the line.

Many of the data regarding the necessity of pasteurizing all the milk supply have been derived from European sources. Ice has always been scarce in Europe, and hence the icing of milk is not the usual practice. Milk is thus unfit to give unless heated, as this is the only practical way of keeping it. Milk that is clean and cool from the start and kept in this condition until it reaches the consumer is a different proposition. There is a large and widening field for milk produced and handled in this way. It occupies a field of its own that cannot be displaced by any other kind of milk.

The constantly broadening knowledge of nutrition that is resulting from chemical studies and from animal feeding experiments should be a warning against passing laws that will prevent progress, and no regulations should be tolerated that will put normal, physiologic milk beyond the reach of physicians and the public at large. Certified milk, produced with scrupulous care, under the oversight of a reliable medical commission, and then properly handled in the home, is the ideal solution of the milk problem, at least as far as the delicate infant or invalid is concerned.—Chicago Medical Society Bulletin.

CAN CORRECT SNORING

Snoring is a habit but it is a habit due to causes which medical care and attention will correct. Dr. Herman Bundesen, Chicago commissioner of health, points this out in a recent weekly bulletin and urges snorers to get proper treatment for the conditions that cause snoring.

If a person awakens in the morning with a dry mouth, a tongue like leather and a dark brown taste, says Dr. Bundesen, his suspicions may be aroused that he is a snorer. Snoring is due to vibration of the soft palate or uvula and usually occurs when sleep is most profound.

As a rule, snoring indicates some disturbance in the breathing apparatus, especially obstruction in the nose. Such obstructions may be the result of polypi, tumor growths, enlarged turbinates, bony deformities or sinus infections. A deviated septum that encroaches on the air space of one nostril may be the cause.

In children, snoring is usually an indication of enlarged tonsils or adenoids. Mothers should give special attention to the cure of these conditions in children as the longer the delay, the more serious are the complications likely to follow, Dr. Bundesen makes plain.—Hygeia, Oct. 1924.

A drive has been launched in England to raise a fund of £180,000 as an endowment fund for the new Obstetric Hospital in connection with the University Hospital of London.

By raising this amount, the hospital will be able to secure the Rockefeller Foundation gift of £1,250,000 for the establishment of an advanced school for medical education and research in London.

SOAP

There are so many soaps on the market that, to many of us, soap is just soap, and unfortunately, we do not pay enough attention to the qualities obtainable in soap or use enough discrimination in the purchase of it.

If any one commodity can be said to be universally used in the hospital, it is soap. The value of soap as an antiseptic agent was brought forcibly to mind by some experimental work conducted in English field hospitals during the Great War

Particularly significant is the fact that the ordinary toilet soap appears to have removed the greatest number of bacteria in the wash water.

In the hospital, the immense possibilities of what has been termed "hand to mouth infection"—that is, the transference of bacteria from the mouth to the hand of the patient or nurse, to utensils, door knobs and apparatus—indicate that a very thorough cleasing of the hands at frequent intervals with a good toilet soap is desirable.

A Huge Kettle of Boiling Soap

—when Dixon, Bates and Haycroft stated, as a result of their observations of soap in the treating of gunshot wounds, that "we are using more soap and less of the other antiseptics."

Norton, in an extensive investigation as to the value of soap for cleansing the hands from bacteria, found that in the wash water the bacterial count varied from 60,000 to 8,445,000.

Frequent washing of the hands in an atiseptic solution is likely to develop severe cases of dermatitis, as it is difficult to find an antiseptic which is both active as an antiseptic and harmless to the skin.

To assure this thorough and frequent cleansing of the hands in the hospital, it is necessary to provide a toilet soap which will not be harmful or irritant,

which will not have a drying effect on the hands, but which will have a smooth, beneficial action, be as free as possible from caustic alkali, and which will not leave a residue of small particles of fatty matter in the fissures of the skin.

Soaps which contain a large quantity of animal fats will not rinse off thoroughly in water of low temperature, and are likely therefore, to leave this undesirable residue.

All of which indicates that the desirable toilet soap for the hospital, for the use of patients, nurses and doctors, is a pure vegetable soap, a true sapo durus — such a soap as Palmolive, which has gained quite a high reputation because it meets the requirements stated above.

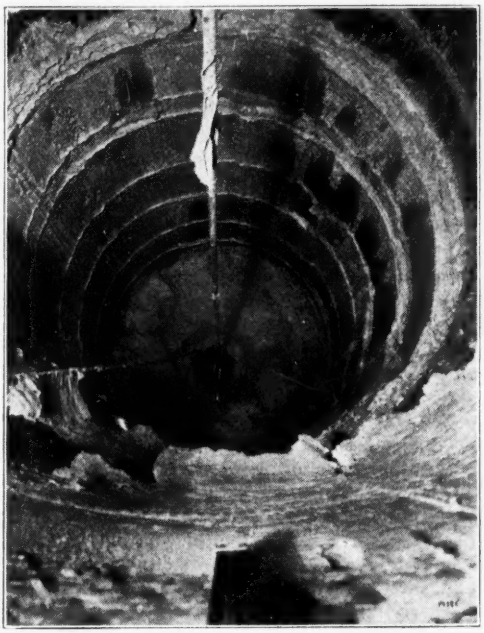
This soap contains only vegetable fats—olive oil predominating, giving the soap a true castile character and its typical chlorophyl color, which is the natural color of the olive oil and is not obtained by any artificial coloring.

It has no free caustic alkali, no excessive unsaponified oil, and does not interfere with the natural secretion of the sebaceous glands.

The immense popularity of this soap calls for its manufacture on gigantic lines.

Anyone who remembers the old kettle with which Mother made soap out on the farm and stirred it with a sassafras stick, will be interested in our illustrations of one of this company's soap kettles, which has a capacity of about 400,000 pounds and stands about five stories high. It takes up two weeks to boil a kettle of soap, and the work is in charge of expert soap boilers, men whose life work is the job of boiling soap.

The Palmolive Company is always glad to send a sample box of its soap to the hospital executive who is interested in testing its particular value in institutional work.



Looking Into an Empty Soap Kettle

HOSPITAL INTERNSHIP

Without an internship in a modern hospital, a medical student's training is incomplete. This internship now constitutes a year of advanced clinical instruction, and is spent in the personal examination and treatment of patients. The student, while still under supervision, learns to apply the knowledge he has previously obtained in the clinical years of the medical course. Any errors he may make either in diagnosis or in suggested treatment are corrected and actually aid in his training, whereas in individual practice they might be repeated indefinitely, to the detriment of his patients. In the one or two years of intern training, also, the student has obtained more practical knowledge, perhaps, than he would obtain in the first five years of individual practice. Following such a training he enters practice after his skill in diagnosis and treatment has been demonstrated—a matter of obvious importance to the public. Meanwhile, during his intern service, patients in the hospital have received more well supervised care than would be possible in a hospital without interns. As medical education has been improved and as students have been better trained in medicine, the value of their services as interns in hospitals has been greatly enhanced. This has led to a larger demand, which has been further increased by many new hospitals. This demand cannot be met by the number of students graduating each year because, although the numbers of graduates are increasing, so also is the demand for interns. There is a further important development in connection with intern training, however, that may help to solve the problem. The practice of some hospitals in requiring recent graduates to enter at once on an intern service in a single surgical or other special department of the hospital, rather than in a general rotating service, is now recognized as faulty. This is one of several influences which are precipitating young physicians into specialization in fields for which they may not be best adapted, and for which the training obtained is too brief to develop the essential knowledge and skill. It would be better to require all young physician to complete a rotating internship in a general hospital which will qualify them for general practice. Then those who desire to specialize will have a better idea as to which specialty to select. Again, the heads of special departments can select from among the interns those best qualified to act as special interns long as is necessary to complete the essential training in his chosen specialty. A broader plan is being followed in some hospitals whereby essential review courses in the fundamental sciences and certain advance courses in physical diagnosis and in technic are being required for admission to the special internship, or combined with it, thus providing a more complete training in each specialty. This arrangement is particularly adaptable in hospitals connected with medical schools where the facilities for the additional review courses are available. The arrangement for such advanced special internships by many well conducted general and special hospitals will not only help to relieve the present shortage of interns, but will also provide more opportunities for the complete and efficient training of those who are to enter the various specialties, and, better still, will further improve the routine care of patients in those hospitals.—*Jour. A. M. A*

How to Use and Care for Your Refrigerator

THE refrigerator is like all other equipment—in one respect. In order to derive the most efficient service from it, the refrigerator must be given a sufficient amount of attention and care.

There are those, possibly, who, after installing a refrigerator, promptly forget it until some failure of service draws their attention to it. Many others would use and care for their equipment more carefully if the importance of this were impressed upon them.

The purpose of this article is not to convey the impression—which is not the truth—that refrigerators are "cantankerous" and "temperamental," requiring the utmost care and consideration.

But there is a right and a wrong in the use and care of refrigerators which the vast army of users will likely be glad to have called to their attention. If a few important points are observed there is much greater likelihood of satisfactory and lasting service.

Where It Should Be Placed

For instance, the very placing of the refrigerator has an important bearing on the service it will render. The room itself should be well ventilated.

Obviously if the refrigerator is exposed to excessive heat, as when near a range, its efficiency will be greatly impaired. It should never be placed where the sun strikes it directly, nor should the refrigerator — as sometimes occurs — be placed out-of-doors, exposed to rain and the elements.

Use Plenty of Ice

The ice chamber should be filled to capacity the first time. However, before placing any foods in the refrigerator it is essential that the box should have reached a low temperature. To set up a good circulation in the box, leave the food doors open for a period until the ice begins to melt freely.

It is important to keep the ice chamber filled to its capacity rather than allow it to become nearly empty before replenishing. When the ice supply is very low, the temperature of the box rises. Since it is vital to keep the temperature low and uniform, it is both more effective and economical to put in a little ice each day rather than to wait until the chamber is nearly empty.

Ice should never be wrapped in blankets or paper. This keeps the ice from melting, and since the temperature of the refrigerator is not lowered when ice does not melt, it is clearly wrong to attempt to practice "economy" in this way.

It is well known that opening the door of a refrigerator, admitting the outside warm air, interferes with the circulation and affects the temperature of the box. Of course, the doors must be opened, but it is well to see that this is done with care. It is not always necessary to open them as wide as they will

swing. They should not be kept open longer than necessary, and when they are closed they should be tightly latched.

Storing the Foods

The air circulating in a well-made refrigerator bears a close relation to placing foods—upon which a word of advice may be offered.

With the ice in the upper left hand corner of the refrigerator, the direction of circulation is counter-clockwise — s t a r t i n g down the left side of the refrigerator and returning up the right side, warm air always going to the top.

With this fact in mind, odorous foods should be placed near the end of the circulation so that the air passes over them last before being condensed on the ice, in which process the impurities gathered by the circulating air are carried off through the drain pipe.

Butter, cream, eggs and milk food requiring the lowest temperature should be placed on the lower shelves at the beginning of the cold air circuit. Meat and mixed dishes next, and last foods that are enclosed in packages — vegetables, cheese and other odorous articles.

It is important to bear this in mind: Never place uncovered foods on the ice. Milk in bottles or canned goods may be excepted since they will be protected by their containers. The practice of placing foods on the i c e, though fairly common, should be avoided because it interferes with efficient operation of the refrigerator.

Of Course, It Should Be Kept Clean

Keeping a refrigerator and refrigerator equipment clean is a small matter, yet a very important one. It requires little time and it should be included in your regular routine. You can't be too particular about the cleanliness of your refrigerator. By keeping it clean you are helping to accomplish that purpose for which it was intended—to keep foods pure and wholesome. By neglecting it and allowing it to become dirty, or unsanitary, you are opposing its main purpose.

Your refrigerator a n d its equipment should be cleaned at least once a week. The storage chamber, its walls, rack and doors, rails and hooks, should be thoroughly scrubbed and then washed with a deodorant, such as ammonia, or sal soda, in warm water.

Drainage Pipes

The drainage pipes need attention once a week, too. This is a most important part of the equipment to keep clean.

Straight drainage pipes are more desirable, as they are easily cleaned and do not collect slime and dirt as easily as do those with many elbows. Most refrigerators are, or should be, equipped with sanitary drain traps. It is very essential that these traps be cleaned at least once a week, since they accumulate slime. They should be cleaned along with the drain pipes. Hot soda water is a good cleansing agent.

Other Parts

The ice chambers, doors and sills, need to be cleaned once a month, but it is essential that they be cleaned *thoroughly*. All racks should be removed and thoroughly scrubbed with hot soda water. The dripping pans beneath the racks should be scrubbed in the same manner. In doing this, be sure all traces of slime and mold are removed. After these parts are thoroughly dried, they can be replaced.

It is equally necessary to keep your refrigerator coils clean if you happen to be using them instead of ice. Frost, if allowed to collect, will produce thick ice and the insulation will reduce the refrigerating value of the coils.

A good way to maintain the original finish or lustre of the refrigerator is to use an oiled rag, following it with a polishing cloth. Windows and other glass parts of the refrigerator may be easily cleaned with ammonia water. The nickel-plated parts should be polished with a good grade of grit-free silver polish.

A clean refrigerator is always attractive. By observing these few simple directions, giving the refrigerator a reasonable amount of care, it in turn will give even better or longer service than was bargained for.

The Hospital Laundry

By SAMUEL COTTON

The Sixth of a Series of Practical Articles on the Equipment and Operation of the Institutional Laundry

(*Written Especially for* HOSPITAL BUYER)

DESIGN OF GARMENTS

IT IS just beginning to be realized in hospitals that the laundry expense may be reduced greatly by the adoption of garments that are simpler than the ones in common use. For instance, if aprons are made without tucks and frills, so they will open out flat, they may be ironed quickly and cheaply, either by passing them through the flat work ironer or by means of a pressing machine.

As the design and cut of garments used in a hospital has a direct bearing on its laundry costs, and as it has been found that tucks, frills and gathers may be removed from many garments without detracting from their appearance in any case, and with improvement in many instances, this is a matter that is well worth going into. Another economy that may be effected by the simplification of garments is a decrease in the amount of material required and a lessening of the cost of manufacture.

In a few hospitals it has been found that it is possible to iron much apparel, especially when simplified garments are used, on a certain type of flat work ironer. This machine resembles the ordinary flat work ironer, but instead of having rigid rolls it has compensating rolls, working in bearings that have a spring tension.

These machines are covered with a very thick padding, and with this added resiliency it is possible to iron on them aprons, underwear, pajamas, nightgowns and various other articles of apparel, without damage to the goods nd without breakage of buttons. Even dresses are put through one of these flat work ironers in some hospitals. In asylums and similar institutions where there are many resident

patients, this method of ironing will be found to be very satisfactory and extremely economical. Compensating-roll flat work ironers are made in both the multiple-roll and the cylinder type.

Repairing Goods

The matter of repairing damaged goods has a direct bearing on the length of time the articles will last. The ideal way is to make the repairs as soon as a defect appears, before sending the article to the laundry again, but in a hospital this may not always be practical.

As a usual thing, very small holes, rips or tears receive no attention until they get large. As a rule, there is not long to wait for this enlargement, and in a short time the little hole becomes a great gap. This may happen at the next washing, and it may be that the articlce is damaged beyond repair. Then the laundry is very apt to get the blame, although it is the repair department that has been neglectful.

All laundered articles should be inspected before they are put into service, and all necessary repairs should be made before the pieces are issued. Then, if needed, the repaired piece should be sent back to the laundry to be re-ironed, but as a rule there will be no necessity of re-finishing. When a damaged piece is found in the laundry, it should be returned to the linen room, unless it is too badly soiled to be handled by the seamstress.

In every hospital, large or small, there should be a definite and regular system of inspection of the goods, with responsibility for its thoroughness resting on one person. But this person should have the co-operation of all others in the hospital and in its laundry, and when a damaged piece is discovered it should be sent to the linen room for repair.

In some hotels there is in use a linen-inspection table that is well adapted to hospital use. It is so inexpensive and easy to make that any institution can afford one. This may be constructed as follows:

Take a large table, about four by six feet in size and about three feet high. Into this table, at a convenient distance from one side, cut a hole about eighteen inches square, and set a pane of glass flush with the top, so as to make an even surface. Under this glass put a 40-watt electric bulb, with a suitable connection to an inlet. It is well to box in the bulb and paint the sides and bottom white, so the light will be reflected upward through the glass. If desired, the table may be covered wtih white oilcloth, with a piece cut out to leave the glass uncovered.

When a sheet or other article is passed over the glass, the light will plainly show any hole, large or small, that may be in the cloth. It also will show any thin place that is about to become a hole, and the place may be darned before the hole appears, which, as all can see, is a thrifty thing to do.

This offers a much more rapid means of inspection than the old method of holding articles up to the light. It is not even necessary to open up all of the folds of a sheet or other article when inspecting it, as the light will show through several thicknesses of goods. When a defect is found, the place may be marked with a crayon or by means of a small safety pin, and at intervals the damaged pieces should be sent to the repair room.

The linen room should be closely co-ordinated with the laundry department. As a matter of fact, it may be well to have both of these departments under the supervision of one person. If this is done there will be fixed responsibility and an absence of bickerings and disputes between the two departments in regard to this, that and the other thing. At any rate, there is no good reason why the two departments should be distant from each other. In the smaller hospitals one marking machine must serve both the laundry and the linen room, and this is a good reason for having the two departments near together.

NEW MASONIC HOSPITAL

THE masons of New York have at last secured a hospital of their own. This has been their ambition for some years. They have been working toward the establishment of a completely equipped, modern hospital in this city, where they can take care of the sick, irrespective of race and creed, and now they have taken over the maintenance and support of the Broad Street Hospital, in the Wall Street or financial section.

This well-known hospital will be developed with additional equipment and buildings for clinic and pathological services. The plans as originally conceived contemplated the erection of a Masonic hospital on a downtown site, and this idea found liberal support from Masons throughout the metropolitan area. Facing an urgent need of hospital facilities, however, the Order effected a working arrangement with Broad Street Hospital a year ago, the institution turning over one floor to a Masonic medical staff.

Later a second floor was obtained, but it was found that the space was still inadequate, and the Order decided that it must either build a hospital immediately or obtain one by purchase or negotiation. The latter plan was adopted as the most practical, considering the time required for the building.

Included in the financial consideration in the transfer is a payment by the Masonic Order of $260,000 on cash obligations and assumption of mortgages of $310,000 on the hospital buildings and equipment—a total of $570,000.

The transaction was closed by a special committee of the Masonic Hospital Foundation headed by Troy Alexander, of the brokerage firm of E. P. Hutton & Co., and corporate members of the Society of the Broad Street Hospital, including James Barber, its president. Mr. Barber founded the hospital in 1916.

Under the plan the downtown public, which has supported the hospital since its inception, will co-operate with the Masonic Hospital Foundation in extending the scope of its usefulness.

To raise funds for this Masonic Hospital, the first Masonic Fashion Show and Home Exposition was held in 1922. It proved so successful that a second one was held the following year, and it has become an annual event. More than $350,000 was obtained from the first two shows—$175,000 going to the Masonic Soldiers' and Sailors'

Memorial Hospital at Utica, N. Y., and the balance going to the city project.

Mr. Barber is to continue as president of the hospital.

Dr. McClelland, superintendent, in discussing the change, said: "The great problem heretofore confronting the Broad Street Hospital has been to develop as rapidly as possible the many laboratories and departments which the downtown community requires to render beneficent service. The application of various methods of diagnosis, together with the multiplicity of instruments of precision that advancing medical science requires, makes it of extreme importance that complete equipment be installed with the view to aiding the doctor in the study of his case and the better treatment of the patient.

"The new organization will strive for the betterment of medicine and surgery in all its branches, and will give particular care to systematic and scientific nursing. These, in a general way, are the important things the hospital will strive to furnish."

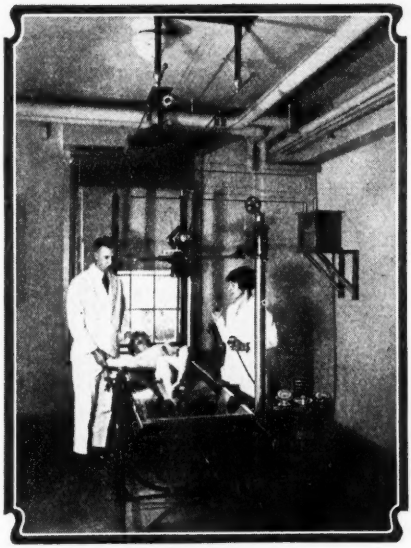
The Fallacy of Using Alcohol for the Sterilization of Surgical Instruments

Nye and Mallory, in the Boston Medical and Surgical Journal of October 18, 1923, state that in order to determine the effect of the operating-room sterilizing solution (70-per-cent alcohol) on a gas-producing sporulating anaerobe, the following experiment was performed. Six six-inch pieces of fairly heavy sterile iron wire (about 18 gauge) were immersed in an anaerobic plain bouillon culture of the gas-producing sporulating anaerobe obtained from a Bard-Parker knife blade. The wires were withdrawn, placed in a large sterile test tube, and incubated at 37.5° C. until dry. Five were then placed in individual sterile test tubes containing sterilizing solution, and allowed to remain 5, 10, 15, 30, and 60 minutes. The five wires and the one untreated wire, serving as a control, were cultured anaerobically in plain bouillon. All showed abundant growth and gas after twenty-four hours' incubation at 37.5° C.

It seemed logical to conclude that in all probability at least one, and possibly two, of the fatal "gas" cases they met were due to infection at the time of operation by Bard-Parker blades or scissors used two or three days previous on a known "gas" case, and improperly sterilized prior to reuse.

In view of these findings it seemed advisable to change the method of operating-room sterilization of scalpels, scissors, and Bard-Parker blades. It was decided that they should be sterilized along with the other instruments, that is, by immersion in boiling water for twenty minutes. In addition it was decided to discard all Bard-Parker blades after use. Operating was resumed, and since that time no cases of postoperative infection have occurred in which suspicion could be directed to the improper sterilization of instruments as the source of contamination.

From the simple experiment reported herein it can be definitely stated that immersion in alcohol (70 per cent) for one hour will fail to sterilize instruments grossly infected with bacilli belonging to the B. aerogenes casulatus group.



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American Dietetic Association Convention

The seventh annual convention of the American Dietetic Association is announced for October 13 to 16 at the New Ocean House, Swampscott, Mass.

A perusal of the program shows a comprehensive list of papers and meetings of unusual interest, not only to the dietician but to the hospital superintendent and everyone else interested in the executive offices of a hospital.

In addition to the commercial exhibits, this year will see the beginning of a permanent non-commercial exhibit, which will display methods and forms used by hospitals, dispensaries, commercial firms, and social service centers throughout the United States and Canada.

We note that Doctor MacEachern, President of the American Hospital Association, is scheduled for a paper in the Hospital Dietary Department, "A Forecast." We are sure this will be a notable contribution to a vital subject, and we hope in a succeeding issue of HOSPITAL BUYER to reproduce this and several other papers which will be presented at the meeting.

The following is a list of the officers, chairmen, and committees:

Officers of the Association

Lulu Graves, Honorary President, Mount Sinai Hospital, New York City; Octavia Hall Smillie, President, Andalusia, Ala.; Effie I. Raitt, Vice-President, University of Washington, Seattle, Wash.; Rose Straka, Second Vice-President, Presbyterian Hospital, Chicago, Ill.; Breta Luther Griem, Secretary, 501 Cass Street Milwaukee, Wis. Anna E. Boller, Treasurer, Central Free Dispensary, Chicago, Ill.

Chairmen of Sections

Administration, Maude A. Perry, Montreal General Hospital, Montreal, Can.; Dieto-Therapy, Florence H. Smith, St. Mary's Hospital, Rochester, Minn.; Education, Dr. Ruth Wheeler, University of Iowa, Iowa City, Iowa; Social Service, Gertrude Gates Mudge, Huntington, W. Va.

Committees

Membership, Breta Luther Griem, Chairman, 501 Cass St., Milwaukee, Wis.; Program, Katherine Fisher, Chairman, Good Housekeeping Institute, New York City; Legislation, Genevieve F. Long, Chairman, Walter Reed Hospital, Washington, D. C.; Bulletin, Emma B. Aylward, Chairman, 1750 West Congress St., Chicago.

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Publicity, Quindara Oliver, Chairman, Children's Hospital, Boston, Mass.; Local Arrangements and Hospitality, Amalla Lautz, Chairman, Peter Bent Brigham Hospital, Boston, Mass.; Trips, Amy M. Facet, Chairman, Women's Edu. and Indust. Union, Boston, Mass.; Registration, Breta Luther Griem, Chairman, 501 Cass St., Milwaukee, Wis.; Local Representative, Eva Thallman, Massachusetts Gen'l Hospital, Boston, Mass.; Exhibits, Anna E. Boller, Chairman, Box 71, Riverside, Ill.; Non-Commercial, Miss Inez Reeves, Miss Frances Stern and Miss Katherine Fisher; Commercial, Local Representatives, Miss Quindara Oliver, Miss Charlotte Addison, Miss Harriet Wells and Miss Ruth Chambers.

The First Orthopedic Clinic in Holland

It is remarkable that orthopedics have hitherto received so little attention from the medical profession in Holland, but this condition is likely now to be remedied by the opening, at Leyden, of a new orthopedic clinic—the first in the country, says an editorial writer in the Lancet, August 23, 1924.

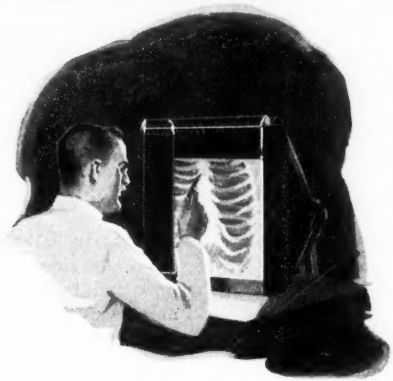
For more than ten years a number of infirmary buildings have been under construction in Leyden, supplied with laboratories, clinics, and dispensaries for every branch of medicine at a total cost of some £1,250,000.

One of the buildings, which was originally designed for a fever hospital, has been allocated to the Society for the Welfare of the Crippled and Disabled. This hospital has accommodation for forty beds, twenty of which will be paid for by the Government and will be used for teaching purposes. Dr. Murk Jansen, who is now lecturer in orthopedic surgery at the university, has been appointed director.

Many difficulties had to be overcome before this project could be carried out. The opposition to the establishment of the clinic on the part of some surgeons is noteworthy, the Lancet's correspondent writes, as giving an idea of the old-fashioned professional outlook in Holland in certain directions. The surgeons there have continually opposed the separation of any branch of medicine from surgery, and for this reason it took a long time before otorhinolaryngology, dermatology and urology became separate specialties. For the same reason, too, there are in Holland no surgeons who specialize in surgery of the abdomen or brain.

It must be remembered that for many years in all the British medical centres specialism was looked at with considerable suspicion, one fact being insisted upon and another fact suppressed. It was continually pointed out that there could be no sound specialism that was not founded on general medicine, but it was a long time before it was allowed that progress along special lines would be most surely arrived at by special work. The first is true, but the second is no less true.

The establishment of the new clinic, under an orthopedic surgeon so well known as Dr. Jansen, should do a great deal to further in Holland the development of this branch of medical science. — Medical Journal & Record, Sept. 17, 1924.



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Eastern Hospital Notes

By Hospital Buyer Special Correspondent

WITH the designation by the Rt. Rev. Bishop Thomas E. Molloy, of the Holy Family Hospital, in Brooklyn, as the Catholic Diocesan Hospital preparations are now being made for many events which are to be conducted in aid of the new hospital building, which is to cost $1,000,000, to be erected on a plot adjoining the present building.

The trustees of Holy Family Hospital have secured a large part of the site for the new structure, which is to be the finest type of hospital building in the borough, and in keeping with its prominence as the diocesan institution. Its equipment will be complete in every detail, and its staff will be composed of physicians and surgeons of the highest standing.

At a recent meeting of the Brooklyn Surgical Society statistics were submitted showing that 41 per cent of the patients who were operated upon in the Brooklyn hospitals during the years 1920 to 1923 for chronic and perforated ulcers, died.

The figures were admitted to be authentic yet they were characterized as "seven times greater than they should be," by Dr. Robert Barber, of the Long Island College Hospital.

"The reason in my opinion, why we have before us such an astounding mortality rate," Dr. Barber declared, "is that the surgeons operate not only too soon but too thoroughly. Often the patient is operated upon when he can scarcely stand the strain. What he needs is rest, some relief, and then to be permitted to gain the curative benefits which nature may be able to give him."

In an earlier paper on "Duodenal Ulcer," Dr. John Jennings of the Brooklyn Hospital advocated the stopping of the death rate in ulcer operations by preceding the major operation by the extraction not only of the patient's infected teeth but also of his tonsils and all possible sources of tractional infection.

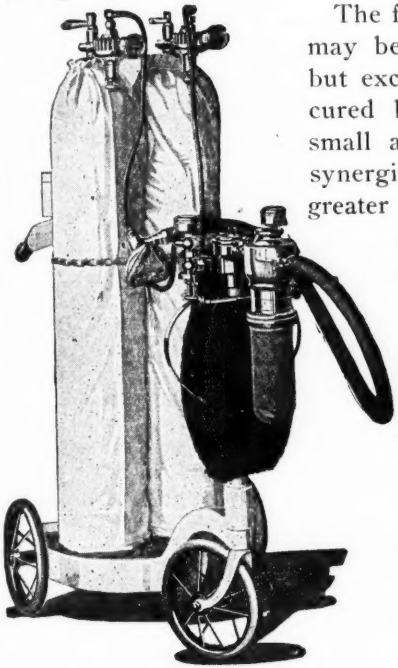
"That may be all right in theory," asserted Dr. Barber, "but I don't want anybody to do that to me. The rate of mortality is seven times greater than it should be in the borough hospitals. During the next year the surgeons must remedy this, and they can only do it in my opinion, by operating less often than they are doing today."

Dr. Edwain Fiske, of the Holy Family Hospital, and Kings County Hospital, a public hospital, urged his fellow surgeons to use more care in the handling of hospital patients.

"One way to reduce this mortality rate," he said, "is to take more care with the patients when they arrive at the hospitals, and before they are operated upon. Often they are given cold baths before the operation. That reduces their vitality measurably. Hot packs should be applied to them, and they should be allowed to rest quietly before taking the anaesthetic. We must remedy this condition in our hospitals."

In Abdominal Operations

Gas-Oxygen is particularly indicated for abdominal operations in the weak and debilitated; in pulmonary, cardiac and nephritic complications; in the anemic from old or recent hemorrhages; in the inflammatory states and in old age.



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Among prominent public men who are lending their support to the movement for the establishment of this hospital are: David Belais, president of the Humane Society; August Belmont, Abram I. Elkus, Police Commissioner Richard E. Enright, William Fox, I. Flugelman, secretary of the Hotel Association; General J. G. Harbord, Edwin Gould, William Fellowes Morgan, George J. Ryan, president of the Board of Education; Charles H. Sabin, the Rev. Dr. Samuel Schulman and Fred Sterry.

THE SURGICAL CONGRESS

The annual congress of the American College of Surgeons is being held in this city on October 20. Brooklyn hospitals have been preparing to receive several hundred physicians coming from all parts of the country to attend this congress.

For the purpose of entertaining the visiting surgeons the Brooklyn institutions have formed what is known as the Council of Brooklyn Hospitals. Dr. John E. Daugherty, of the Jewish Hospital, is chairman of the council. S. L. Butler, superintendent of the Long Island College Hospital, is the secretary and treasurer. Every recognized hospital in the borough is included in the membership.

The visiting surgeons are to be entertained at several hospitals. They will spend most of their time inspecting local institutions and in viewing operations performed by noted surgeons of Brooklyn.

Many of those attending the convention are residents of towns where hospital facilities are poor. They have expressed their desire to visit the Brooklyn institutions because of the exceptionally high calibre of these institutions and the splendid reputation they have everywhere in the country.

Children's Hospital

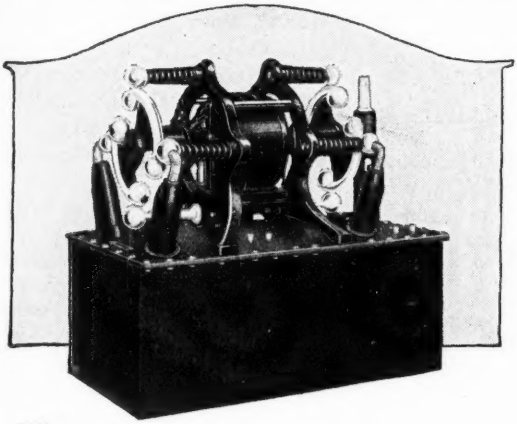
What is expected to be the finest children's hospital in this borough will be opened soon by the Long Island College Hospital. Work on the unit is to be started at once and it is believed that the wing will be completed within a month.

At present the young patients at the hospital occupy six wards and many private rooms. The number of patients at this institution in the last year has been so large as to cause congestion. Then, too, every week the hospital had to turn away persons seeking admission.

Supt. S. L. Butler decided that the building of a separate wing to house children would prove more satisfactory to the little patients and at the same time enable the institution to utilize for adults the space now occupied in the main building. The Board of Regents favored Mr. Butler's proposal and plans were prepared for the children's hospital.

The wing will be equipped with every device known to modern surgery, and physicians who have been laying out the operating rooms and laboratories say that it will be the best children's unit in the borough.

Work has just been completed on remodeling the home for nurses connected with the hospital, as well as repainting the institution. Next month a restaurant for nurses will be built.



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How Healthy Is the Doctor?

Following the advice medical men have been giving to their patients to have an annual medical physical examination, the Kings County Medical Society recently promoted a survey among doctors of its borough to find out what the rush of city life told in its effect upon the health of its medical men. It was found that the medical men responded well to the test and on the whole they were in better general condition than the other groups of the community.

Dr. Anna Mann Richardson, of the committee of dispensary development, United Hospital Fund, who conducted the survey in Kings County Medical Society, reported on the results of her investigation. Although she made such a favorable report, she suggested that "on the basis of the sample examined, one-third of the membership of the society might well practice birth control."

In all ninety-one physicians were put under a rigid examination, and the results were compared with those obtained from examinations of persons in other occupations. In speaking of the examination generally, Dr. Richardson had this to say:

"This examining experience has been of value to our committee in supplying us with a group of intelligent and friendly critics who can help plan the next steps in developing the practice of preclinical medicine."

The examination of the medical men was compared with the examination of postal employes, commercial insurance group, industrial insurance group, members of the Life Extension Institute. Under "physical defects," the doctors were found to have none—the same being true of some others. Under the classification "serious physical defects requiring immediate surgical or medical attention," another cypher was chalked up for the doctors, while the percentages in the other groups ran as high as 14.2. The next lowest to the doctors was 2 per cent for the commercial insurance group. The doctors topped the list for minor defects needing observation or attention.

In her report, Dr. Richardson said that although physicians have the reputation of making poor patients, experience would indicate that this reputation does not apply to them as victims of health examinations. As a group they were not only keenly interested, but also friendly and understanding in their acceptance of individual suggestions. The work was carried on by appointment; seventeen per cent of the appointments were broken.

The health examinations gave the examining physician two bases for judgment—the filled-in questionnaire, stating habits and daily routine, as well as feelings toward life; and the examination itself, supplemented by incidental conversation.

Dr. Richardson said it was found that whereas many of the doctors were overweight, their blood pressure generally was lower than that of the others. The doctors also excelled in the teeth and constipation classification. Thirty-one of the ninety-one physicians were overweight. Nine of these were only slightly overweight, while sixteen were moderately fat,

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Hospital.....

and six tipped the scales at a figure that would cause them to be refused life insurance on this ground alone. A 36-year-old examinee frankly admitted that he had too good a cook. All of these men were active and carried their overweight well, and all were very good sports in recognizing the advantages of reduction.

While most of the doctors appreciated the value of exercise, few were so able to adjust their obligations as to have time for the desired amount. Over half of them left their exercise to chance—this was two out of three in the group of thirty-five—three out of five in the group between thirty-six and fifty, and half of the older group. Only two, martyrs to the cause, admitted taking corrective exercises daily. Sixty per cent of the doctors got their recreation through shows, music and radio.

The drinking of water, which doctors urge upon their patients, is not a uniform habit among the doctors themselves. One out of three reported drinking less than four glasses a day. Sixty-five per cent drank some straight milk every day, 23 per cent drank no coffee; 61 per cent took one or two cups a day, while 16 per cent confessed to consuming three or more cups a day. Tea was not medically popular, for 61 per cent took none, the remainder taking it occasionally.

Thirty-five per cent do not smoke, while 33 per cent smoked moderately or not more than ten cigarettes or two cigars or three pipes a day. The remaining 30 per cent smoked more than this, yet only 6 per cent were felt to be smoking to excess, judged by the health advice given.

Cooking as an Art

At no time in the world's progress has such a large variety of foods been available as there is at present. Better transportation facilities have enabled us to gather food products from every point, and to serve them very nearly in the same way and under the same conditions in which they are used in their native lands.

America has food resources that cannot be duplicated by any other nation. We also have such splendid transportation facilities that practically any food can be delivered at our doors in perfect condition. This means that we should have the best cuisine in the world—but have we? Many international travelers have questioned it, and you will never get a foreigner to agree that it is on a par with the dishes offered by many of the European hotels.

Possibly the trouble lies in the lack of the American public's demand for a movement that would result in bringing back the seemingly lost art of cooking in this country. A demand of this kind was recently evidenced in France—and it accomplished surprising results.

The French Government authorized a group of culinary exhibits which were held in connection with the Autumn Salon. By this action cooking was elevated to a par with the other arts—in fact, it was proclaimed the eighth art. At this Salon practically every French province was represented on the menu by a special dish or a famous wine or liqueur.

When we stop to realize that food is the most essential thing in life, it does not seem odd that the French officials should have honored it so highly. In a large

measure individuals and nations become successful in proportion to the nourishment they take.

Leading chefs attribute the decline in the art of cookery in America to such causes as too high a degree of standardization, the lack of a discerning taste on the part of the public, impatience to wait for properly prepared dishes and the lack of training in our younger generation of cooks. Obviously many of these evils are directly traceable to the American public itself and, since hotel men are obliged to cater to them, it would seem that the only solution to this part of the difficulty would be to conduct a larger number of salons like those abroad in order to educate the public's taste. Such a plan would not only encourage our chefs to higher efforts. It would also stimulate the use of a greater variety of foods and eventually place the art of cuisine on a higher scale and impress the public with the necessity of having well cooked and artistically served meals.—*Hotel Management.*

The Altro Workshops Render Unique Service

The Altro Workshops have been exhibiting for quite some time at the hospital conventions, and this year received some well deserved publicity.

These workshops provide occupational training and wage-earning work for patients fighting their way back from tuberculosis to health and strength.

The following statement on the work is taken from the Daily Bulletin of the Hospital Convention:

The diabetics, according to the Director of Social Service of Mt. Sinai Hospital, New York, as they improve in general condition and are found equal to part time work, are presenting an employment

Whole Grain—Yes

But transformed into a confection

Quaker Puffed Wheat and Puffed Rice offer all the priceless food elements of the whole grain. Every kernel is steam-exploded to eight times normal size—every food cell broken to insure easy digestion and assimilation.

Puffed Grains, from the food experts' standpoint, rank as a true health dish. To the children who revel in these airy grain bubbles they seem like fairy foods.

Grown people enjoy Puffed Wheat and Puffed Rice as much as the children. They're such a welcome change from routine breakfasts.

And so many ways of serving—with sugar and cream, floated in bowls of milk, with fresh or canned fruit. And, between meals, salted and buttered like popcorn. Before bedtime, a bowl of Puffed Wheat or Puffed Rice is a boon to brain-workers, inviting peaceful sleep.

Quaker Puffed Wheat
Quaker Puffed Rice

problem. They are being referred to the Social Service Department for supervised work.

The Altro Work Shop is considering admitting this group with the same medical control that is provided for the tuberculous.

Their new work shop in New York City will be completed this month. It will be the only institution of its kind in the world and has been built so as to allow for expansion.

The Directors hope to add cardiacs, orthopedic cases, carefully selected mental cases and perhaps diabetics to the class of patients cared for. New industries must be found and suggestions will be welcomed.

In the new building the main activity will continue to be the making of garments. Approximately 10,000 square feet will be given over to the garment and uniform industry. It will be a model plant with individual motors for each sewing machine, ingenious cut outs in the machine tables with boxes beneath for completed work, special adjustable chairs to reduce fatigue, a pressing arrangement which both sterilizes and irons—a clothes drying machine with changes of clothes for patients who come to work with wet clothes—dining room and kitchen—indoor and outdoor rest rooms for men and women and other unique features.

Almost 5,000 square feet will be available for new occupations and two additional floors can be added.

Will Irwin, the noted writer and correspondent, himself a T. B. graduate, found the motives and purposes of the Altro were not those of any garment factory he had heard of. The time clock was used to see that workers did not work too long. The hours of work as prescribed by the doctor were the only law with which there could be no compromise. The standards were of highest because trade training went hand in hand with physical rehabilitation. The more skilled the worker the less he will have to depend on high speed production. So he is taught that there is no garment so cheap but what the workmanship must be of the best.

The patients earnings play a great part in his mental rehabilitation. The rate of pay must be at least equal to that which affords a living wage—no less than the union wage for similar processes even though some factories pay low wages for this work.

The lack of profits, for no one profits from the conducting of the factory but the patients themselves —makes it possible to compete with garments of equal standards. This has been demonstrated by the increasing number of patients served. The factory started with less than twenty patients; today approximately 75 are employed and as a larger market can be found the number will be increased to over 100.

An exhibit of the Altro Work Shop garments can be found at booths 29 and 31 and Mr. Edward Hochhauser who has been in charge of the work since its inception will be glad to receive suggestions and discuss the work in detail.

The new work shop will be opened early in November and visitors welcomed. Out-of-town visitors can arrange to be met or called for. The experiences of the work shop are at the disposal of any community interested in the problem.

ONE
way to cut costs

STEWARDS and managers of hospitals often feel that many different brands of soap and cleansers are necessary.

That way too much money is paid out. For each such job lot requires special purchasing, receiving, recording, storage, and fuss and bother in checking, distributing and all the other routine work many brands mean to the management. All the time-consuming, money-wasting tasks.

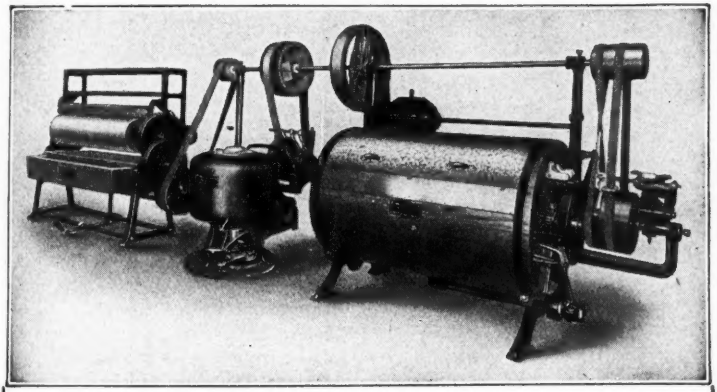
One soap manufacturer's product for *all* soap needs and purposes gives you *one* standard quality to depend upon. *One* purchase to make. *One* record to keep. Smaller space necessary for storing. Simplicity in checking. Ease in distributing.

That is the reason why many important hospitals have standardized on one leading brand—Palmolive made soaps.

Drop us a card for interesting, valuable information and figures on savings made.

Address for residents of Wisconsin, The Palmolive Company (Wis. Corp.), Milwaukee, Wisconsin. Address for residents other than Wisconsin, The Palmolive Company (Del. Corp.), 360 North Michigan Avenue, Chicago.

2611



A typical Hospital installation of "MATEER" Laundry Machinery

Write for Catalog

F. W. MATEER & CO.

Established 1893

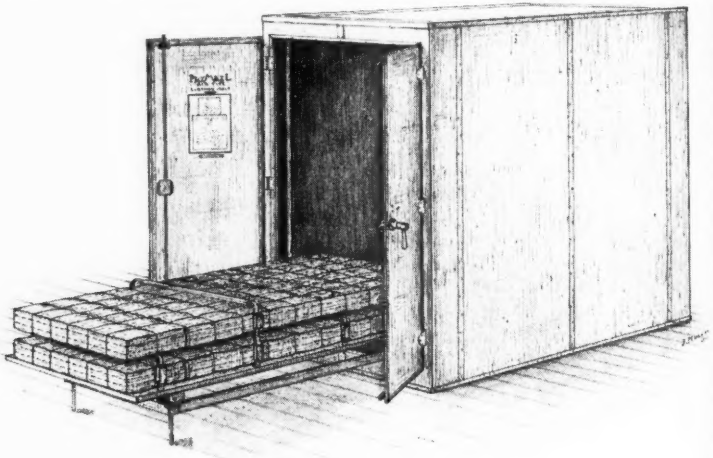
226-232 WEST ONTARIO ST. CHICAGO, ILL.

Effective Fumigation Accomplished by Airtight Vault

FUMIGATION has long been known as an effective means of destroying pathogenic bacteria. With the proper fumigant, such as formaldehyde gas, disinfection may be accomplished without the slightest injury to the most delicate fabrics.

In the past, the chief difficulty was in securing a gas-tight chamber. The fumigant escaped into the halls and corridors in spite of the most careful precautions. As a consequence, fumigation grew into disfavor in the measure that it was found difficult to secure gas-tight rooms. The futile attempt to confine the gas resulted in the spread of a disagreeable odor as well as the loss of effectiveness due to the dilution of the gas.

Theoretically, at least, it should be easy to construct an air-tight fumigation chamber. But practically there are several ever-present difficulties that vitiate the best plans. Wherever wood has a chance to shrink and swell — and that is always the case — there are potential leaks. Doors of the conventional construction can rarely be made gas-proof. Not until wood was discarded and metal adopted, was real progress made. With a metal sheathed material, Plymetl, chambers or vaults are now constructed for hospital use. Though light as wood, Plymetl is as impervious to gases as the thickest boiler plate steel.



The figure illustrates a vault constructed for the fumigation

of bedding, rugs and large pieces of furniture. The doors are filled with powerful interior clamps or locks that are operated by handles on the exterior of the doors. These serve to bring the doors into gas-tight contact with the door jambs so that when the doors are closed the vault is, in effect, hermetically sealed. It will be understood that the doors are fitted with thick gaskets at all edges. Even though these in time become compressed or slightly worn, the door clamps automatically take up this difference so that at all times an air-tight closure of the doors is an absolute certainty. There is no type of door construction that can equal this for reliability under all conditions of weather and temperature. The doors are metal clad on both faces. They are permanently flat and warp-proof.

What is the particular bearing of these mechanical details —all of which are worked out for air-tightness? The point is just this: The effectiveness of any fumigant is completely dependent upon its concentration. Particularly is this true of formaldehyde which must be highly concentrated to accomplish disinfection. The same thing exists in the case of carbon disulphid, which is the most effective fumigant for insect life. Only uncertain results can be expected when these fumigants are used in a leaky chamber. Both have odors that are not pleasant. Both for the sake of convenience and necessity, the gases must be confined.

The applications or uses of an air-tight container or vault in a hospital are many. With the fumigants mentioned above, vaults provide a safe, effective and convenient means of disin-

SIMPLEX
3 Unit Laundry Outfit

Gives the small Hospital or Institution the same advantages as the large ones get from their expensively equipped laundries.

You smaller Hospitals can show proportionately just as great a saving.

A Simplex installation will quickly pay for itself.

"*Profit and Loss in Clean Linen*," tells you about the experiences of the small Hospitals who are doing their own laundry work.

Your copy is waiting for you. A post card request will bring it.

American Ironing Machine Co.
100 E. Ohio at Michigan Ave.
Chicago, Ill.

fecting clothing and of freeing them from insect life. Scientific tests have determined the factors for satisfactory operation. Among the services afforded by such a vault are the following.

"Airtite" Clothes Vault

1. Destruction of pathogenic bacteria,
2. Extermination of insect life,
3. Prevention of aging of drugs due to exposure to air,
4. Removal of dampness from clothing, fabrics, etc.,
5. Elimination of dust settling on clothing,
6. Protection against fire and petty thievery.

Extensive tests conducted at the National Pathological Laboratory have shown the value of the vault in killing bacteria. Many different methods of using formaldehyde were tried, with the result that the permanganate formalin method was adopted. These tests were conducted on a vault the size of which was 26 in. by 26 in. by 60 in. The cubical capacity was 20.3 ft. Dr. J. J. Moore of the laboratory writes:

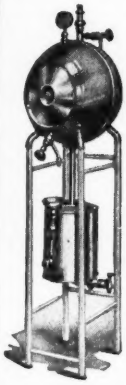
"In this test 50cc of formalin solution was poured in a large beaker and 25 grams of potassium permanganate placed in the formalin. The vault was immediately sealed and opened after four hours. The cultures were all sterile at the end of 18 hours, with the exception of those wrapped in the toweling, and these again contained bacillus subtilis.

"The above experiments show that non-spore forming pathogenic organisms, when on exposed surfaces, will be destroyed by formalin solution used as described.

"During the experiment with the formalin, no odor of the gas escaped from the vault, showing the door was air-tight. This is important in fumigating because it is a well-known fact that rooms and closets that are to be fumigated, must be sealed in order to have effective destruction of the bacteria. This is important also because material can be fumigated in it in a room without causing any annoyance to the people working in that room."

It has been suggested that the time of fumigation be increased from four hours to eight hours. This would have the effect of increasing the degree of penetration. It is noted that 2.5cc of formalin is required for each cubic foot. For example, in a vault 6 ft. by 8 ft. by 10 ft., 1.2 liters (0.317 gal.) of formalin and 0.6 kilograms of potassium permanganate would be required. At the current market price, formalin would cost about 63½c. This is figured at the rate of 25c a lb. The potassium permanganate,

The Eclipse Door



found only in our autoclaves is sealed steamtight without the use of gasket or other mechanical device as long as there is any pressure. The door cannot be opened by accident or error until the steam has been let out.

A full description is found in the newly revised Sterilizer Blue Book. Sent on request.

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Jewel Electric Fountains

We make several styles of portable, illuminated, electric fountains for the home reception room and institution. They add considerable beauty to a sun parlor and are excellent humidifiers. Attach them to any socket, no water connection is necessary.

They are used by many physicians in their efforts to make their homes and offices an artistic joy. Send six cents for illustrated catalog on our electric fountains and dishwashers.

JEWEL ELECTRIC CO.
Dept. HB 4505 Ravenswood Ave., Chicago, Ill.

LAUNDRY MACHINERY

The American Laundry Machinery Company manufactures a complete line of laundry machinery. It maintains a corps of engineers who are specialists in planning hospital and institutional laundries.

If you are building, or considering the installation of a new laundry or the improvement of your present plant, you will find consultation with these specialists advantageous.

The American Laundry Machinery Company,
Norwood Station, Cincinnati, O.

CANADIAN FACTORY: The Canadian Laundry Machinery Co., Ltd.,
47-93 Sterling Road, Toronto, Ontario, Canada.

at the rate of 35c a lb. would cost about 46c. The total cost of this fumigation would be $1.09½. In large quantities the chemicals could be purchased cheaper Prorated on a cubic footage basis, it costs about a fourth of a cent per foot. For every 10 cubic feet the following amounts are required:

25cc or 0.85 fluid oz. of formalin,
12½ grams or 0.44 oz. of potassium permanganate.

It should be clearly understood that formaldehyde is not an insecticide. For killing clothes moths, and in fact, all insect life, carbon disulphid is the fumigant that is accepted and approved by the U. S. Bureau of Entomology. Here again there exists a vital need for an air-tight container; for if the gas does not reach a saturated state, it will not kill insect life. Moreover, various insects show different degrees of resistance to the action of the gas. To be uniformly effective, a high concentration must be attained and this implies an air-tight container.

Tests have been made on the vault by the United States Department of Agriculture, Bureau of Entomology. These tests showed that carbon disulphid is effective in killing both the moth larvae and flying moth. The fumigant is very convenient to use because results are accomplished in a minimum time of seven or eight hours.

Applied heat is not necessary; the fumigant is simply poured in a receptacle at the top of the vault and allowed to evaporate. The gas, being several times heavier than air, diffuses through the vault very quickly. Unlike formaldehyde, its power of penetration is very high. Tests have shown that the gas penetrated a 74 yard of velour, diameter 8 to 10 inches, in sufficient quantities to kill all moth life.

While the gas is very penetrative, it also disappears very quickly from clothing when it is aired. Unlike the lighter gases, such as those emanating from gasoline, naphthaline, benzine, etc., carbon disulphid does not cling to clothing. The gas is inflammable, but with an air-tight **vault** there is no **danger** except at the time of opening it after a fumigation; at this time, proper precautions may be easily taken and the gas can be dispelled very quickly.

A full statement of the process to be pursued in carbon disulphid fumigation was prepared by Dr. W. A. Drushel, of the Haskelite Manufacturing Corporation and approved by Dr. Howard, of the United States Bureau of Entomology. For every 7 cubic feet of space in the vault, approximately 1 fluid ounce of carbon disulphid is required.

It is obvious that the air-tight feature of this vault opens up many commercial applications or uses. For example, the keeping of valuable fabrics, clothing, drugs and instruments in an atmosphere practically free from moisture and dust[1] is a vast convenience and in many cases a decided economy. Practically all the moisture from the air in the vault can be absorbed by the placing of calcium chloride in the vault. A pound of this inexpensive chemical — $24.30 per ton according

[1]An analysis of typical Chicago dust collected in June, 1924, shows the following constituents:

Moisture.	4.4%
Tar.	3.5%
Carbon (coal soot)	39.4%
Ash (containing alkali)	52.6%

It is obvious the alkali and soot due to soft coal are largely accountable for the premature aging of fabrics.

to present market—will keep a small vault absolutely dry for many months, depending on the number of times it is opened.

One of the uses is the keeping of drugs that are in containers which are not air-tight. This undoubtedly has great value in hospital use where sometimes quantities of valuable drugs are discarded on account of the aging effect of air and moisture.

Mr. George R. Meyercord, in commenting on the commercial aspects of this hospital vault said in part: "Obviously, air-tight vaults of this description serve two distinct purposes in hospital operation. For instance, an investment of three or four hundred dollars will place a large vault on each floor, which will serve the needs of the forty or fifty beds on that floor. All the bedding, rugs, draperies, etc., are fumigated quickly, conveniently and effectively. The linens from contagious cases, for example, may be first fumigated in this vault, thus making it possible to send them to the general laundry. The convenience of the process insures that it will be used frequently with the attendant beneficial results.

"A second feature of the vault, constructed in the smaller or clothes-closet size, is the individual service given to patients. Air-tight vaults like this are found today in many of the finer homes. In hospitals they afford even greater value in clothing protection than in residences. One hospital I know of particularly is featuring these vaults very largely as one of the newest of the modern, scientific appliances that contribute to the patients' comfort."

IF NOT— WHY NOT?

If you have not bought any of these supplies at our special fall sale prices —it is not too late

FOR 30 DAYS

We offer them at the following reduced prices in order to cut our stocks for inventory:

2BR43977. 3½ in. Gauze Bandages, doz. **$1.75**

2BR43577. 25 yd. Gauze Cartons, 24x20 mesh,
Each . .....**$ 1.95**
Dozen. **19.25**

2BR2655. Club Paper Napkins, 14x14, per M, ...**$5.25**

2BR2656. Club Paper Napkins, 17x17, per M, ...**$7.25**

2BR2657. Club Paper Napkins, 20x20, per M, ...**$9.50**

1 Oz. bottle Protargentum, each **$0.45**

2BR1699. 500 cc Graduate W. E., each.....**$0.49**
Dozen **$4.95**

2BR7514. Basswood Splints, doz **$0.25**
Gross **$2.50**

2BR2600. Crepe Paper Handkerchiefs, 7x7, per package of 1M, each **$0.49**
Lots of 2 pkgs, each **$0.39**

An Exceptional Opportunity

This is an exceptional opportunity to stock up on the items offered. Each item is guaranteed to be of satisfactory quality, and the prices are low enough so that it will pay to anticipate your needs for some time ahead.

FRANK S. BETZ CO.
HAMMOND, IND.
New York - - - Chicago

Effective Fumigation Accomplished by Air-Tight Vaults
List of Figures

Fig. 1. Every detail of this vault is worked out for air-tightness. The value of air-tightness in obtaining the best results from fumigation is explained in the accompanying article.

Fig. 2. View of vault fitted with carriers. For the fumigation of mattresses and bedding.

Fig. 3. Air-Tite clothes vaults in this size are installed in homes for daily service. Protect against moths, dust, dampness, thieves and fire.

PER CAPITA FOOD COST

The following interesting methods per capita Food Costs appeared in S. Ogden Chedwick in Hotel Management.

The determination of per capita food cost of American Plan meals is a comparatively simple procedure.

The installation of an adequate system would first necessitate taking a careful inventory of all stock on hand, including stores in ware-house, store-room, refrigerators and pantry. This inventory should be priced at cost or market, whichever is lower, and should include cost of delivery, such as freight, express or drayage charges.

The inventory would probably be taken in pencil in any common book having a money column, such as a cheap cash book. The work should later be written up with pen and ink in a regular inventory book. The prices must be figured on unit cost. That is to say, it will not be sufficient to know the price per case or dozen, but the cost of each item in stock must be ascertained, such as a can of tomatoes, a pound of bacon, and so on.

When the inventory has been completed, a loose-leaf price list should be prepared, which may be accomplished easily by writing each item and its price on separate pieces of small paper, or cards, and filing them alphabetically.

In order to determine the per capita cost of meals, it is only necessary to know the total cost of all food items issued daily.

A simple form for making a record of issues from stores consists of a sheet of sufficient size to accommodate the number of items issued. This sheet is ruled horizontally into seven columns. The first column provides space for writing in the names of the different articles drawn from stock; the next three columns are for the quantity of the first, second and third issues (it will seldom be necessary to draw out the same article more than three times in a single day); the next column indicates the total issue for the day; the next is the unit price column, and the last is the cost column. The total cost of food issued, divided by the total number of meals served during the day will, of course, give you the per capita food cost.

The storekeeper may also keep a perpetual inventory of stock on hand with very little additional effort. This is not absolutely essential, but is a very good practice. To do this it is necessary to have a receiving book, in which is recorded each incoming shipment of stock. This, added to the stock on hand at the beginning of the day, less withdrawals as shown by the daily report, will give the balance of stock on hand at the end of the day. This figure should, however, be verified at least once a month by an actual count of stock.

The only books required are the inventory book, receiving book and daily report sheets. Almost anyone who can write and figure a little can keep these records.

Made under license from the Chemical Foundation, Inc.

Neoarsphenamine, D. R. L.

The effectiveness of D. R. L. NEOARSPHENAMINE is well illustrated in the experience of Dr. Edward L. Merritt, Urologist to the Truesdale Hospital and Clinic, Fall River, Mass. (Military Surgeon), September, 1923.

In a series of cases covering 1609 injections, Dr. Merritt compares results from various brands of Arsphenamine with those obtained from one brand (D.R.L.) of Neoarsphenamine and concludes that the latter is as valuable a therapeutic agent as Arsphenamine; that it is considerably less toxic than Arsphenamine and, because it may be given in such small dilution, causes less shock to the patient's system.

Many leading syphilographers, using Neoarsphenamine, D.R.L., exclusively, agree with Dr. Merritt's conclusions. Neoarsphenamine, D.R.L., will average between 50 and 75 per cent above the government safety requirements.

Physician's Handy Bulk Package: contains 10 ampules of the superior D.R.L. Neoarsphenamine (0.9, 0.75, 0.6, or 0.45 Gm.), along with 10 ampules of double distilled water for which no extra charge is made. Ask your dealer or pharmacist. Accept no substitute.

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THE DERMATOLOGICAL RESEARCH LABORATORIES

1720-1726 Lombard Street, Philadelphia

The Electronic Reactions of Abrams

FOR the last three or four years the public—and the medical profession—has been regaled by the marvelous discoveries (alleged) of one Albert Abrams of San Francisco.

Abrams, who died a few months ago, claimed to have evolved a system of diagnosis whereby he could determine the sex, race, disease and even the religion of a patient he had never seen. He was able to do this from a sample either of blood or handwriting from the individual.

More wonderful still, Abrams claimed to have invented an apparatus that he called the "Oscilloclast," by means of which he was able to cure most of the ills of the flesh. In connection with his diagnostic and curative stunts, Abrams devised some fearfully and wonderfully made pieces of apparatus that seemed to be a cross between a radio set and one of the quaint devices depicted by Goldberg in his inimitable cartoons.

The scheme of the Abrams cult consisted essentially in declaring that practically everybody that applied for diagnosis was suffering from cancer, syphilis, tuberculosis and streptococcic infection. After endowing the victim with these serious conditions — and charging him for it—the poor patient was then told that he could be cured by means of the "Oscilloclast" at so much per treatment.

Finally, in March, 1922, the Journal of the American Medical Association published the first of a series of articles on Albert Abrams and his preposterous theories and practices. Other articles followed, continuing until the latter part of 1923. It was shown in these that the Abrams cult was made up to no small extent of crude and blatant advertising quacks, near-quacks and faddists, with a sprinkling of men who, while they liked to be considered respectable, were essentially unscientific and venal.

During the time that these articles were running, it was repeatedly suggested that the American Medical Association conduct a scientific investigation of Abrams' claims. The Journal pointed out, however, that Abrams had been given an opportunity at different times of subjecting his theories to scientific test and had rejected these opportunities, and that for a scientific organization to conduct an investigation of Abrams' theories would be to dignify that which was preposterous on its face.

Because the medical profession refused to treat Abramsism as a scientific possibility, Abrams himself loudly proclaimed an alleged desire to have his methods and theories tested.

Finally, a lay publication of unimpeachable character undertook the very thing that Abrams had clamored for. The Scientific American, a magazine the

standing of which is established on both sides of the Atlantic, announced in its issues of October, 1923, that it was making an investigation of the "Electronic Reactions of Abrams" and "Electronic Medicine" in general.

The Scientific American has published twelve papers in as many issues of the magazine, and the twelfth and final one appeared in the September issue and contains the verdict.

The work was done by a committee of men expert in their fields. There were on the committee, (1) a man who has investigated psychic phenomena, (2) a civil engineer, (3) a specialist in electrical and radio work, (4) a physician who has a national reputation for certain phases of medical research work and (5) a well-known bacteriologist and hygienist.

The results of this exhaustive investigation are expressed in the opening paragraph of the Scientific American's closing article:

The so-called Electronic Reactions of Abrams do not exist —at least objectively. They are merely products of the Abrams practitioner's mind. These so-called reactions are without diagnostic value. And the Abrams oscilloclast, intended to restore the proper electronic conditions in the diseased or ailing body, is barren of real therapeutic value. The entire Abrams electronic technic is not worthy of serious attention in any of its numerous variations. At best, it is all an illusion. At worst, it is a colossal fraud.

Particularly pertinent is one of the closing paragraphs of the report:

Meanwhile, this electronic development has caused a sad state of affairs in this world of ours. It has given rise to all sorts of occultism in medicine. It has been a renaissance

"Oats and Milk"

—*and the breakfast problem solved*

Solved in two ways, for here's a true health breakfast in the form of a cereal dainty.

In Quaker Oats, oats which take high rank in calories, protein and mineral value, are made extra delicious. The rich, delicate Quaker flavor gives the morning bowl of porridge a new delight.

Quaker Oats are flaked from the finest, plumpest grains which can be grown. Our quality standards accept only 10 pounds of flakes to a bushel.

QUAKER means quality to food experts the world over. It's a famous name in every civilized nation.

Standard full size and weight packages—

Medium: **1¼ pounds;**
Large: **3 pounds, 7 oz.**

Quick Quaker **Quaker Oats**

Cooks in 3 to 5 minutes

The kind you have always known

of the black magic of medieval times. It has given free reign to iodic ideas—ideas which would formerly have been laughed out of existence at their very start. Suffering humanity has been made so many lavish promises of late that it is a sad disillusion now to go back to our conservative orthodox medicine, which, after all, remains our mainstay.

"So much for Buckingham." The Scientific American has done a good job and a public service. To many physicians, the investigation carried out by that magazine may seem to have been a tremendous waste of valuable time and expert energy. In a gullible world, however, it often becomes necessary to prove by an Euclidean Q. E. D. the supposedly patent fact that the moon is not and never was made of green cheese.—A. J. C., Hygeia, Oct. 1924.

United States Veteran Hospital No. 30 annex, located at 7531-41 Stony Island Avenue, and leased to the government until July 1, has been sold to Dr. Frank Deacon, President of the Chicago Hospital. The building was erected and equipped about four years ago by Dr. Peter C. Clemensen and was then known as the Jackson Park Hospital; the lot is 160 x 110 feet, and was conveyed by the Jackson Park Hospital Association at a consideration of $225,000 and was subject to an encumbrance of $70,000. The building will be completely refurnished and operated as a modern hospital by the purchaser. Considering the scarcity of hospital accommodations in Chicago, this additional medium with a capacity of over one hundred beds, will render a service much to be appreciated in this community.

New Window Shade Fabric

A new kind of window shade fabric formed of material with a woven cotton base and a pyroxylin finish is now being widely used by hospitals, hotels and other institutions. The application of this pyroxylin coated material to window shades was perfected after considerable research by chemists who investigated thoroughly the problems of developing the fabric, the use to which it would be put, and the conditions affecting it when in use.

The material was developed at the request of business men who wanted a fabric which was better adapted to actual service conditions than the ordinary shade cloth. They found that when shades became ruined by rain, the carelessness of leaving the window opened was condemned and not the fabric from which the shades were made. The same thing happened when shades became faded by sunlight.

The idea was to develop a material which when it became soiled could be cleaned and renovated, instead of being replaced. The new fabric when soiled through use or exposure can be renovated by scrubbing with soap and water.

It has been specially constructed and treated chemically so that it will not crack or sag, thus avoiding two of the main reasons for the replacements of ordinary shades at frequent intervals.

The introduction of this pyroxylin-coated material into window shades, it is expected, will revolutionize this part of institution furnishings, because it permits a cleaning and restoration of shades even after long use.

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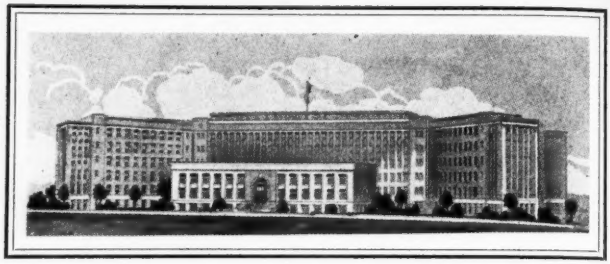

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